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# Introduction: Qualitative Analysis: Quantifying Quality and Qualifying Quantity

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## Introduction: Qualitative Analysis: Quantifying Quality and Qualifying Quantity

### Abstract

As part of a partnership between The Qualitative Report (TQR) and Comissão Organizadora/Comité Organizador do CIAIQ2015 e do 6ºSIMEDUC (<http://www.ciai.org>), António Moreira and António Pedro Costa had edited a selection of papers from the conference to create a special issue for TQR.

### Keywords

The Qualitative Report, CIAIQ, Qualitative Research

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## Introduction: Qualitative Analysis: Quantifying Quality and Qualifying Quantity

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*As part of a partnership between The Qualitative Report (TQR) and Comissão Organizadora/Comité Organizador do CIAIQ2015 e do 6ºSIMEDUC (<http://www.ciaiq.org>), António Moreira and António Pedro Costa had edited a selection of papers from the conference to create a special issue for TQR.*  
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The tag cloud above was obtained from the keywords offered for each chapter and evidences the descending weight of the terms Qualitative, Research, and Analysis, depicting at a very low, but even level, all the other keywords. Keywords: Higher, Centrality, Development, Methods, webQDA, Education, Group, Machines, Nursing, Barriers, Feedback, Student, Consumer, Software, Teaching, Theory, Involvement, Facilitators, Thematic, Technology, Methodology, Vending, Conceptual, Gender, Questioning, Communication, Framework, Tourism, Information, Grounded. The intent behind the building of this tag cloud was exactly to see, by looking only at the keywords associated to each chapter, if the book, as a whole, was or not about what we intended it to be: a book on Qualitative Research. The third strong word “Analysis” appeared as an added bonus to this quest, and acts as confirmation of our purpose. Therefore, the present book deals with research methodology – more specifically with qualitative data analysis –, and is composed of five chapters that report research conducted under this method in various research domains where non-numeric subjective content rather than objective numbers composed the data obtained from the research techniques and instruments that were used in each of the studies.

The issue of qualitative vs quantitative research is not new, and will not fade away easily. Positivist and naturalistic positions vis-à-vis research are still, in some cases, taken to extremes, especially when dealing with human beings in social contexts such as education, attitudes, representations, etc. where the former school of thought is adamant that there is a way to neutralize variables and factors that lead research on humans in such a way that experiments are controlled and groups can be “sterilized” so that no contamination of extraneous or outside interference can influence those same experiments; therefore, the results obtained can be generalized to the whole population from where the sample of individuals was

taken, with a statistical degree of significance that can be measured accurately, within a preset margin of error attributable to chance. On the other hand, however, the latter stand for a position that defends that human beings are not lab rats and, because they are humans, and therefore with very different and ever evolving personalities, such aseptic environment cannot ever be obtained or guaranteed, and generalizations of results have to be made with care, taken with a pinch of salt and a great deal of caution if the experiment is to be repeated with the same sample and/or replicated with another very much alike one. Here, one does not expect to obtain the exact same results, under the boundaries of whatever error margin, but nevertheless interpretable in slightly the same way. And that is the result of change (people change, their moods change, they age, events they witness change their views on things and the world, the researcher, also a human, changes due to the same factors, including knowledge increase on the actual topic of research, and so on...).

Nevertheless, both methods possess merits and pitfalls and, these days in fact, researchers tend to take the best of both attitudes towards research, melting them down into what is referred to as mixed-methods approach. So, when we think about Qualitative (data) Analysis (QDA), two streams of reasoning come to mind: (i) are we supposed to quantify quality or (ii) to qualify quantity. The answer is twofold as we have to do both, in reality. So as to treat collected non-numerical data – say, for instance, transcripts from interviews or focus groups –, we either look at the data from an aprioristic set of categories point of view, or we just adopt an open minded stance and allow categories to emerge. From my experience, it is better to work out an aprioristic set of categories that comply with our research question(s) and objectives, and be flexible enough to allow unforeseen categories to emerge as a “demand” from the data itself. Obviously, because we are categorizing extracts, excerpts, words, sentences, or whatever measure of text, we are actually establishing patterns that account for tendencies. These can only be explained in terms of recurrence and therefore in terms of quantity. Thus, looking at data and separating it into chunks that fall under a category (pre-defined or emerging), that is, under a label, we are simultaneously making separate piles of chunks that have the attributes of that category. Furthermore, we may find relationships between the quantity of chunks in one category and that of another one, therefore inferring what type of correlation might exist between the categories. For instance, if you perform QDA on the symbolism of color in areas like “history,” “flags and heraldry,” “religion,” “Christianity,” “Judaism,” “Islam,” “Hinduism,” “Buddhism,” “Culture,” “media,” “cinema,” you will certainly find “universals” and “variations within a single culture”, associations and their counterparts, etc. A good reference for this type of study on color can be found in Laura Dilloway (2006). Books like *Eça de Queiroz’ “Os Maias”* (1888), or D. H. Lawrence’s *Lady Chatterley’s Lover* (1928), are two good examples where color can also be studied from the point of view of its symbolic nature, as associated to topics or categories like characters, events, personalities, drama tension, social class, sin, eroticism, endogamy, etc.

Wherever you look at data and question it from a qualitative perspective, it is in the quantitative nature of the building of patterns that we can lay the foundations for interpreting such patterns and the interconnections they establish with each other, be they intertwined and positively correlated or, on the contrary, evidence of a negative or opposing correlation. This can also be further rendered more complex in terms of analysis if triangulation of data, say, from another source, can lead us to interpretations that allow us a deeper understanding of how other patterns can be envisaged and therefore produce novel meanings. And it is in the fabric of the interpretations that we, as researchers, encounter and weave the meanings we can find in that purpose, that knowledge is construed and updated. All this can be done by hand, but dedicated software is a very powerful and helping plus, if you want to get to the results faster, keeping the rigor required from any academic study, and at the same time manipulate the data without damaging what you have already done along the course of your study. If you add to

this characteristic the dimensions of system interoperability and real-time co-coding and encoding of data, a whole new world unveils the potential of performing QDA in a shared manner, putting into action the collective cognition of several researchers at the same time. And this is absolutely wonderful.

All the chapters in this book, as we mentioned previously, report studies in various areas of knowledge that took advantage of the use of webQDA (Nery de Souza, Costa, & Moreira, 2011) to accelerate the processes of qualitative data analysis. And those are to be found in the following sequence:

- In Paper 1, “Asking Questions in the Qualitative Research Context,” Francislê Neri de Souza, Dayse Neri de Souza, and António Pedro Costa deal with the issue and importance of asking the right questions in qualitative research contexts, arguing that research is an ongoing process of questioning data. They address issues that cover QDA as a method that requires questioning right from the start of the study, along all its phases and end results, suggesting that even the research problem or question is the principal and main target of the questioning process. They also offer views on QDA software and other questioning research tools that may be used in qualitative studies, always bearing in mind the coherence required from the academic endeavour to find solutions for problems, or offer comprehensive views of subjective and complex phenomena.
- In Paper 2, “Gathering Information Based on Focus Groups: Consumer’s Involvement in the Use of Vending Machines,” Telma Fernandes, Ângela Silva, Raquel Reis, and Celina P. Leão focus on a specific technique for gathering qualitative data, the focus group, as exemplified by a study on the involvement of consumers when using vending machines, for the purpose of identifying and refining the items to be used in a questionnaire to be used in the quest for the impressions Higher Education Institutions (HEI) students possess on the use of vending machines at the university they are in. Their study itself is not only useful to understand the reasons behind the use of vending machines so that the HEI can monitor and better plan time management and adequacy of catering services it offers; it is also important for the vending machines industry and manufactures, as consumers provide them with hands on knowledge of what their needs are in terms of user-friendliness, reliability, timing for refurbishing, etc.
- In Paper 3, “Performing a Thematic Analysis: An Exploratory Study about Managers’ Perceptions on Gender Equality,” Carlos Costa, Zélia Breda, Isabel Pinho, Fiona Bakas, and Marília Durão approach QDA from the point of view of thematic analysis, also exemplifying it by means of a study of the perceptions tourism managers have of gender equality, and namely explore such perceptions to investigate why gender role changes in leadership positions are so slow. They also uses focus groups as a research technique, this time with the purpose of identifying themes and patterns in those perceptions. Their work highlights the power of webQDA as a speeding up tool for the systematisation of information, fostering the emergence of shared ideas and interpretations, conducive to the reduction of a single researcher’s potential bias, pointing towards a mixed-methods approach (which we also subscribe) that empowers research by making results and interpretations more credible and sustainable. They also put forth the idea

that the qualitative vs quantitative dichotomy is irrelevant up to some point – what really matters is to ascribe credibility and strong foundations to scientific research claims.

- In Paper 4, “Application of Constructivist Grounded Theory in Nursing Research,” Maria da Graça Oliveira Crossetti, Marta Georgina Oliveira de Goes, and Crhis Netto de Brum Federal highlight the application of Grounded Theory (GT) in nursing research as a basis for QDA. GT being itself a qualitative (and quantitative) research method for collecting and analysing data, with pre-defined steps to be strictly followed (collection and analysis of concurrent data, constant comparison at all levels of analysis, initial, focused and axial coding, conducting memos, among other resources, construction of categories, evaluation and development of the theory), finds in webQDA the perfect tool to accelerate processes. In nursing, the authors state, “it allows to understand the process of social interaction and how the nursing team works in everyday situations,” based on Kathy Charmaz’ (2006) theoretical framework.
- In Paper 5, “Methods of Teaching Centered on Learning and Formative Assessment in Higher Education,” Susana Oliveira Sá, Maria Palmira Alves, and António Pedro Costa, tackle methods of teaching centered on learning and formative assessment in HE by analysing the importance of meaningful learning and strategies akin to formative assessment, involving peer to peer centred learning. They report on how active learning methods impact on student involvement and meaningful learning. The research technique used was also the focus group, interviews and transcriptions from 12 hours of class time. The data were also treated resorting to webQDA. Results of the study highlight the fact that students’ involvement in teaching, learning and evaluation has a strong impact on the teaching options, rendering them more active and meaning carrying, allied with effective feedback, make all involved more responsible for improving learning.

To sum up, the present special issue is an important addition to knowledge already made available on Qualitative Data Analysis, where actual studies are used as examples of the application of this research method. Nevertheless, and for those who want to expand their knowledge on this method, there is a very good text by Schutt (n.d.) online<sup>1</sup>, titled *Qualitative Data Analysis* (chapter 10), that we refer to you for a very good and thorough overview of QDA, written in a very easy and flowing way. Take advantage while it is still available.

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<sup>1</sup> [http://www.sagepub.com/sites/default/files/upm-binaries/43454\\_10.pdf](http://www.sagepub.com/sites/default/files/upm-binaries/43454_10.pdf), retrieved 17<sup>th</sup> November 2015.

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Born in Aveiro, Portugal, in 1957, António Moreira holds a PhD from the University of Aveiro, where he performs teaching and research activities. With several books, chapters, articles and educational and research software published in Portugal and abroad, he coordinated the Nónio Século-XXI Local Competence Center, the Digital Contents Laboratory of the University of Aveiro of which he was the founder, and the director of the Specialisation Training Courses, Master's Course in Multimedia in Education. He has also coordinated the Internet@eb1 and CBTIC@EB1 primary teacher education programmes for the Aveiro district. With main involvement in post-graduation, he is the Director of the Doctoral Program in Multimedia in Education, has supervised three internships, 62 pre-Bologna master's degrees, 42 doctoral and 3 post-doctoral students. His main research interests are Cognitive Flexibility Hypertexts in Learning, Communities of Practice and Random Access Instruction. He was from late 2010 until early 2015 the Director of the Department of Education, University of Aveiro. Correspondence regarding this article can be addressed directly to: António Moreira at, [moreira@ua.pt](mailto:moreira@ua.pt).

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